

**FACULTY OF SCIENCE****DEPARTMENT OF ZOOLOGY****MODULE        ZOO0047****CAMPUS        APK****EXAM        JUNE 2014****DATE:        04/06/2014****SESSION        08:30****ASSESSOR(S)****PROF J H J VAN VUREN****INTERNAL MODERATOR****EXTERNAL MODERATOR****PROF D DRAKE****DURATION    2 HOURS****MARKS    80**

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**NUMBER OF PAGES: 2 PAGES****INSTRUCTIONS:        Answer all the questions**

**QUESTION 1**

Briefly discuss how marine animals cope with thermal extremes.

[10]

**QUESTION 2**

In freshwater habitats there are key problems that lead to a change in reproductive strategies. Identify and describe three conditions or changes that become problems to the reproductive cycle. Explain the different examples of strategies invertebrates and fish use to deal with changing conditions.

[10]

**QUESTION 3**

Deserts are very hot and dry habitats. Identify the strategies followed by small ectotherm evaders and large endotherm evaporators to control body temperature under these extreme conditions.

[30]

**QUESTION 4**

Discuss the different feeding methods in most freshwater systems.

[10]

**QUESTION 5**

Freshwater vertebrates are exposed to a permanently dilute environment while marine vertebrates are living in a hyperosmotic environment. Explain how teleosts maintain osmotic concentrations and water balance in these environments.

[20]

**TOTAL MARKS (80)**

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